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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/776,794

02/04/2001

Huy Thatminh Ton

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09/24/2007

THE LAW OFFICE OF KIRK D. WILLIAMS

PO BOX 61538

DENVER, CO 80206-8538

EXAMINER

TANG, KENNETH

ART UNIT

PAPER NUMBER

2195

MAIL DATE

DELIVERY MODE

09/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/776,794

Applicant(s)

TON ET AL.

Examiner

Kenneth Tang

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 36-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-40 and 42-46 is/are rejected.
- 7) ☐ Claim(s) 41 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to the Amendment on 6/29/07. Applicant's arguments have been fully considered but were not found to be persuasive.
2. Claims 36-47 are presented for examination.

### ***Allowable Subject Matter***

3. Claims 41 and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 36-38 and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable by DeKoning et al. (hereinafter DeKoning) (US 6,457,098 B1).**

5. As to claim 36, DeKoning teaches an apparatus for dynamic allocation and management of semaphores for accessing shared resources (col. 9, lines 56-67, col. 11, lines 60-67), the apparatus comprising:

maintaining a semaphore allocation table data structure indicating the currently used semaphores for said resources of a plurality of semaphores (col. 11, lines 33-67, Fig. 4, semaphore table 400);

in response to a received resource active read request for a particular resource from a first task, locating an indication of the particular resource in a particular entry in the resource lock table structure (col. 12, lines 1-14, col. 9, lines 17-55), the particular entry identifying that the particular resource is currently read locked using a first semaphore; and in response: getting a second semaphore from a pool of free semaphores (free semaphore list 410), updating (maintaining the semaphore list of the semaphore table) a semaphore entry in the semaphore allocation table to reflect that the particular resource is associated with the second semaphore in addition to the first semaphore (col. 15, lines 9-42, col. 12, lines col. 12, lines 28-35), and signaling to the first task that the particular resource is available (signaling a release of a lock) (col. 16, lines 8-20).

6. In summary, DeKoning teaches using data resource lock data to determine availability of a semaphore when given a lock request (col. 15, lines 4-67, etc.). DeKoning discloses a semaphore list 410 within the semaphore table 400 (col. 15, lines 14-18) wherein the entries of the semaphore list are searched through as well as maintained/updated (col. 12, lines 28-35). The semaphore list contains the first and second semaphore as well as whether each is associated with being freed or locked (col. 15, lines 12-25). Therefore, DeKoning teaches and reads on the claim limitation of updating/maintaining the semaphore allocation table to reflect the association of the first and second semaphore.

7. DeKoning is silent in that this lock data is arranged in a table data structure that is updated/maintained. However, DeKoning does use a table for the semaphore allocation data (semaphore table 400) and it is maintained and updated. Thus, in the same way, it would be obvious to one of ordinary skill in the art to use any of the wide variety of data structures such as linked lists, arrays, tables, etc., to associate with the lock data of DeKoning because this provides the predicted result of organizing related pieces of information for easy access and maintenance/updating.

8. As to claim 37, it is rejected for the same reasons as stated in the rejection of claim 36. And again, the pool of free semaphores is the free semaphore list 410 in col. 15, lines 4-67 of DeKoning.

9. As to claim 38, DeKoning teaches wherein the received resource request is for read access to the particular resource (col. 15, lines 4-67, etc.); and the method further comprises updating the particular entry in the resource lock table structure to reflect an additional read lock associated with the particular resource (col. 19, lines 20-64).

10. As to claim 42, it is rejected for the same reasons as stated in the rejections of claims 36.

11. As to claim 43, it is rejected for the same reasons as stated in the rejections of claims 37.

12. As to claim 44, it is rejected for the same reasons as stated in the rejections of claims 38.

**13. Claims 39-40 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable by DeKoning et al. (hereinafter DeKoning) (US 6,457,098 B1) in view of Kakivaya et al. (hereinafter Kakivaya) (US 6,546,443 B1)**

14. As to claim 39, it is rejected for the same reasons as stated in the rejection of claim 35. In addition, DeKoning's invention involves awaiting when a resource is available (see above rejection). DeKoning in view of Kakivaya would signal to the first task that the particular resource is available before the end of a timeout if the resource is available. It would not if the resource is not available. However, DeKoning in view of Buckler satisfies the broadest reasonable interpretation of claim 39.

15. As to claim 40, it is rejected for the same reasons as stated in the rejections of claims 36.

16. As to claims 45-46, they are rejected for the same reasons as stated in the rejections of claims 39-40.

#### ***Response to Arguments***

17. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during

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prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

18. *Applicant argues on pages 8-9 of the Remarks that DeKoning does not teach updating the semaphore allocation table to reflect the association of the first and second semaphore.*

In response, the Examiner respectfully disagrees. DeKoning discloses a semaphore list 410 within the semaphore table 400 (col. 15, lines 14-18) wherein the entries of the semaphore list are searched through as well as maintained/updated (col. 12, lines 28-35). The semaphore list contains the first and second semaphore as well as whether each is associated with being freed or locked (col. 15; lines 12-25). Therefore, DeKoning teaches and reads on the claim limitation of updating/maintaining the semaphore allocation table to reflect the association of the first and second semaphore.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kt  
9/11/07

  
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